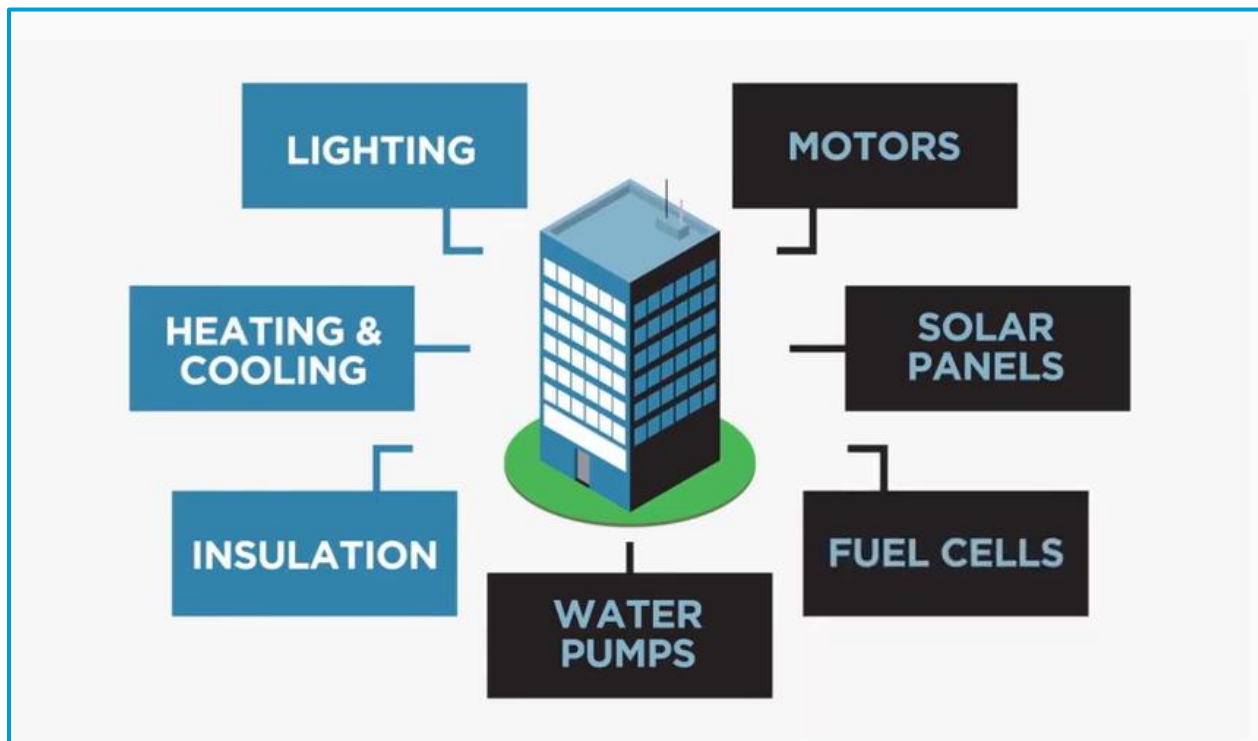




EPAD Improvement Project Examples



On-site Renewable Energy Systems

- Solar electric (photovoltaic)
 - See: [Installing Solar in Louisville](#)
- Solar thermal
- Geothermal including heating/cooling
- Heat recovery systems
- Micro-windmills

Water

- Low or no flow fixtures

Mechanical

- Heating ventilation air conditioning (HVAC) upgrades
- New automated building and HVAC controls
- Variable speed drives (VSDs) on motors fans and pumps
- High efficiency chillers, boilers and furnaces
- Combined Heat and Power (CHP) systems
- High efficiency hot water heating systems
- Heat recovery and steam traps
- Combustion and burner upgrades
- Building automation (energy management) systems

Envelope

- Cool roofs
 - Can save a homeowner [7% to 15% in cooling costs](#)
 - ENERGY STAR products [reduce peak cooling demand by 10% to 15%](#)
 - Example – [Owens Corning Cool Roof Collection](#)
- Exterior Insulation Finishing System (EIFS) insulation
- Green roofs
 - Ideal for urban buildings with flat or shallow-pit roofs
 - Help manage storm water, provide insulation, lower the need for heating and cooling, and can reduce the urban heat island effect
 - A typical 2-3 story building could [save 15-25% in summertime energy costs](#)
 - Can be as much as [90° F cooler than a conventional rooftop](#)
 - More info: <https://www.epa.gov/heat-islands/using-green-roofs-reduce-heat-islands>
- Roofing with insulation
- Window and door replacements

Lighting

- High efficiency lighting such as LED lighting
 - Residential LEDs (esp. ENERGY STAR rated products) use at least [75% less energy](#)
- Automated controls

Other Creative Approaches

- Planting shade trees
 - <https://www.asla.org/treeplacement.aspx>
 - <https://www.arborday.org/trees/climatechange/winterwarmth.cfm>

Additional Resources

- [Keeping "PACE" with EPAD in Kentucky](#) (U.S. Green Building Council)
- [Sustainable Design](#) (American Society of Landscape Architects)
- [Energy Efficiency - Whole-Building Solutions](#) (American Council for an Energy-Efficient Economy)
- [LEED Certification for New Construction and Existing Buildings](#) (U.S. Green Building Council)